

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): An AGC circuit in a CDMA receiver comprising:

an AGC loop ~~for calculating~~operable to calculate a received signal power level from a received CDMA signal and ~~controlling~~control the received signal power level to be constant, wherein ~~the~~ AGC loop ~~includes~~comprises means for ~~controlling the~~determining a portion of the received signal from which the received power level is calculated and wherein further, a length of the determined portion of the received signal is variably controlled based on an amount of gain required by said AGC loop~~control timing based on control amount~~.

B
2. (currently amended): A CDMA demodulator for receiving and demodulating a spread spectrum signal, comprising:

an AGC loop including an intermediate frequency signal converter for converting the spread spectrum signal to an intermediate frequency signal; and

an AGC amplifier for variable gain amplifying the intermediate frequency signal with a control voltage,

wherein the AGC loop includes a power level calculating unit operable to calculate the level of full power in the band of a channel under reception by averaging the receive power over a predetermined time period, wherein the predetermined time period comprises a continuous portion of a particular slot of the spread spectrum signal.

3. (currently amended): A CDMA demodulator for receiving and demodulating a spread spectrum signal comprising an AGC loop including an intermediate frequency signal converter for converting the spread spectrum signal to an intermediate frequency signal and an AGC amplifier for variable gain amplifying the intermediate frequency signal with a control voltage, wherein:

the AGC loop includes a power level calculating unit for calculating the level of full power in the band of a channel under reception, the power level calculating unit starting the power level calculation from an instant corresponding to the forefront of a first slot and stopping the power level calculation at a predetermined instant after the forefront of the first slot, wherein the predetermined instant after the forefront of the first slot is determined based on the gain needed with respect to a desired power level of a second slot.

4. (currently amended): A CDMA demodulator for receiving and demodulating a spread spectrum signal comprising an AGC loop including an intermediate frequency signal converter for converting the spread spectrum signal to an intermediate frequency signal and an AGC amplifier for variable gain amplifying the intermediate frequency signal with a control voltage, wherein:

the AGC loop includes a power level calculating unit for calculating the level of full power in the band of a channel under reception, the power level calculating unit starting the power level calculation from an instant corresponding to the forefront of a slot and making the

length of the subject of calculation to be variable, wherein more than one sample within the slot is used in calculating the power level.

5. (original): The CDMA demodulator according to claim 3 or 4, wherein the AGC loop further includes a control unit for calculating control time according to the result of calculation in the power level calculating unit, calculating and controlling the control timing based on control amount and feeding out the control voltage.

B 6. (currently amended): The CDMA demodulator according to claim 2, wherein the power level calculating unit starts the power level calculation from an intermediate part of a slot.

7. (currently amended): A CDMA demodulator for receiving and demodulating a spread spectrum signal comprising:

an intermediate frequency signal converter for receiving the spread spectrum signal and converting the same signal to an intermediate frequency signal;

an AGC amplifier for variable gain amplifying the intermediate frequency signal with a control voltage;

a demodulating unit for demodulating the output signal of the AGC amplifier to a base-band signal;

a first low-pass filter for limiting the band of the base-band signal to a band corresponding to one channel and feeding out a first low-pass filter output signal;

an A/D converter for quantizing the level of full power in the band of the first low-pass filter output signal and feeding out the quantized signal;

a power level calculating unit for ~~averaging the~~ calculating an average power level of the quantized signal for a predetermined period of time starting from a first instant corresponding to the forefront of a slot and feeding out an average power level signal representing the average power level;

a control unit for calculating control time based on the average power level represented by the average power level signal and feeding out control data upon reaching ~~of a predetermined~~ second instant of time after the first instant of time, wherein the second instant of time is determined based on a rise time of the AGC amplifier;

an A/D converter for converting the control data to an analog control signal; and

a second low-pass filter for waveform shaping the analog control signal and feeding the control voltage to the AGC amplifier.

8. (original): A control timing controlling method adopted in an AGC circuit in a CDMA receiver comprising an AGC loop for computing a received signal power level from a received signal and controlling the received signal power level to be constant, wherein:

Determining
by ~~taking~~ the rise time of the *AGC circuit for the* next slot, the instant of start of control is variably set to be earlier than the forefront of the next slot so as to obtain coincidence of the instant of reaching of a desired voltage with the forefront of the next slot.

9. (previously presented): A method for controlling the timing of an AGC circuit in a receiver in which signals are received during a plurality of independent slots, the method comprising:

calculating the average power of a received signal corresponding to a first slot;
determining a rise time of the AGC circuit specifically with respect to a second slot;
initiating an AGC control of the second slot based on the calculated average power received in the first slot,

wherein the AGC control of the second slot is initiated at a time prior to a beginning of the second slot based on the rise time of the second slot.

10. (previously presented): A method as claimed in claim 9, wherein the AGC control results in the respective power levels of the first and second slots being equal.

11. (previously presented): A method as claimed in claim 9, wherein the average power calculation of the first slot is variably conducted during a predetermined section of the first slot.

12. (new): An AGC circuit for a CDMA receive system, comprising:
a controller operable to calculate a control timing based on an average power level of a portion of a first slot of the intermediate frequency signal and a rise time of an AGC amplifier, wherein the control timing is used to control the AGC amplifier to amplify the intermediate

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 09/686,090

frequency signal such that the AGC amplifier outputs a desired power level at a time corresponding to the beginning of a second slot immediately following the first slot.

13. (new): The AGC circuit of claim 12, wherein the portion of the first slot upon which the control timing is based begins at the beginning of the first slot.

14. (new): The AGC circuit of claim 13, wherein the portion of the first slot upon which the control timing is based ends at a predetermined position prior to the beginning of the second slot.

15. (new): The AGC circuit of claim 14, wherein the beginning and end of the portion of the first slot upon which the control timing is based is determined based on the rise time of the second slot.